

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7

Tony L. Brown and)	
Joshua A. Brown)	Docket No. CWA-07-2016-0053
d/b/a Riverview Cattle)	
Armstrong, Iowa)	
)	
Respondents)	
)	COMPLAINANT'S REBUTTAL
)	PREHEARING EXCHANGE
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Pursuant to 40 C.F.R. § 22.19 of the “Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties,” 40 C.F.R. Part 22 (CROP) and the Presiding Officer's Order of November 14, 2016, as amended, Complainant United States Environmental Protection Agency (EPA) submits this Rebuttal Prehearing Exchange. The Presiding Officer's Order states the following:

“Complainant shall submit as part of its Rebuttal Prehearing Exchange:

- (A) a statement and/or any documents in response to Respondents' Prehearing Exchange as to provisions 3(A) through 3(D) above; and
- (B) a statement specifying the dollar amount of the penalty that Complainant proposes to assess for the violations alleged in the Complaint, and a detailed explanation of the factors considered and methodology utilized in calculating the amount of the proposed penalty, in accordance with the criteria set forth in the particular statute.”

A. RESPONSIVE STATEMENT AND DOCUMENTS

Complainant's case is based on the evidence of discharges from Respondents' facility to the East Fork of the Des Moines River between May 2011 and July 2014, via an inlet to a drain tile directly adjacent to Respondents' facility. This drain tile travels underground approximately 2,700 feet before discharging into the East Fork of the Des Moines River.

Tony and Joshua Brown's cattle facility (d/b/a Riverview Cattle) encompasses approximately four acres and confines greater than 300 head of cattle in concrete open pens. The facility is adjacent to an approximately one-foot-deep, one-acre depression or “swale,” which slopes to the south where an unobstructed field tile intake was located within an impoundment formed by the facility's driveway. During rain events, the facility's process wastewater flowed from the facility's production areas and entered the swale. Prior to modification in March 2015, the swale filled with process wastewater and other overland surface runoff and drained via a

surface inlet to the drain tile and discharged to the East Fork of the Des Moines River. The facility did not employ any process wastewater runoff controls until late 2011.

In late 2011, a concrete “manure pit” was constructed at the north end of the Respondents’ facility. However, surface runoff from approximately 5%, or about 8,000 square feet, of the facility’s concreted production areas continued to bypass the manure pit and continued to discharge directly to the swale during even moderate rain events. The overflow of the manure pit and the entry of wastewater into the swale was directly observed by EPA during its June 2014 inspection, and sample results from wastewater flowing into the inlet to the drain tile documented high levels of pollutants associated with animal feeding operations. The inlet was blocked by Respondents following EPA’s June 2014 inspection. In March 2015, Respondents installed a culvert under the facility driveway so that the surface runoff was directed to the fields to the south, and the swale no longer retained water (CX 5, CX 12). However, the drainage of uncontrolled areas of the Facility into the swale was still observed and documented by EPA during the March 2016 inspection.

To evaluate whether there were days of discharge in addition to those observed by EPA in June 2014, EPA Region 7 conducted modeling of Respondents’ facility to determine how often, and under what circumstances, the Riverview facility discharged into waters of the United States, via the inlet to the drain tile system. The model was conservatively calibrated to local environmental conditions and weather and considers the volume of runoff from Respondents’ open lots, uncontrolled production area runoff, capacity of waste water storage areas (when constructed in late 2011), and other percolation and evaporation losses. EPA’s modeling results demonstrate that the Respondents’ facility discharged process wastewater to the East Fork of the Des Moines River at least 50 times between May 2011 and July 2014 (CX 20, CX 20.1).

1. Evidence of direct drainage of process wastewater from Respondents’ Facility into the “swale” which discharged into an inlet to a drain tile which in turn discharged to the East Fork of the Des Moines River.

As CX 12, Complainant previously submitted aerial photographs of the Respondents; facility. Complainant now submits excerpts of the previously submitted aerial photographs as CX 28, cropped and magnified, in order to demonstrate visible erosion patterns and flows of runoff from uncontrolled production areas of Respondents’ facility into the swale. Mr. Seth Draper and Dr. Steven Wang are expected to testify regarding their review of these aerial photographs, including the visible drainage patterns before and after Respondents plugged the inlet to the drain tile and installed a culvert under the facility driveway that directed surface flow to the south.

Direct runoff from production areas at Respondents’ facility into the swale was observed and documented by EPA’s 2014 and 2016 inspections (CX 1, CX 8). A sample of process wastewater and surface runoff flowing into the inlet to the drain tile was taken during EPA’s 2014 inspection (Sample #1) during a period the manure pit was overflowing, with results showing elevated levels of pollutants (See Paragraph 30 of the Complaint CX 9, CX 1, pg. 11 and CX 1.14). A sample of process wastewater and surface runoff flowing into the swale from the uncontrolled portions of the facility’s production areas was taken during EPA’s 2016

inspection (Sample #3) during a period the manure pit was not overflowing, with results also showing elevated levels of pollutants (CX 8, pg.12). As CX 29 and 30, Complainant is now presenting excerpts of photographs from EPA's 2014 and 2016 inspections, cropped and magnified, in order to demonstrate the observable flows of process wastewater from production areas of Respondents facility into the swale drained by the referenced drain tile.

The location of the drain tile that received flow from the inlet in the swale is documented by diagrams provided by Respondents on November 17, 2014, previously submitted as an attachment to EPA's 2014 inspection report (CX 1.10). The location of the outfall of this drain tile was confirmed during EPA's 2016 inspection, at which time the drain tile was freely discharging (CX 8, pg.9, Photo 29, pg. 59). Over the 2,500-foot surface distance between the inlet to the drain tile and the outlet, the surface elevation drops an estimated 30 feet, demonstrating a positive gradient and drainage within the drain tile would occur (CX 13, 33). Lastly, the effectiveness of the drain tile system is also established by the fact that additional lateral lines were connected by Respondents and/or Bacon Maker Farms, Inc. into the drain tiles in 2010, 2011 and 2012 (CX 1.10).

2. Precipitation data:

As CX 15 and 16, Complainant previously submitted National Climatic Data Center (NCDC) rain gauge data for Swea City, IA (ID: 138026) and 24-hour composite radar imagery documenting rain events at Respondents' facility. This is the closest location to Respondents' facility with verified data. As CX 31, Complainant now submits certification of the data set previously submitted as CX 15 and 16 (CX 31). As RX 6 – 8, Respondents have submitted three different precipitation data sets. Mr. Seth Draper and Dr. Steven Wang are expected to testify that the Swea City rain gauge is the closest verified rain gauge to the Respondents' facility, a distance of approximately 6 miles to the east from the Respondents' facility. This is less than the 25 mile distance to the west for the precipitation data provided by Respondent in RX 8 (Estherville IA municipal airport), while the location and accuracy of the precipitation data provided by Respondent in RX 6 and RX 7 is unknown.

Complainant now submits excerpts of the previously submitted radar images (CX 16) as CX 32, cropped and magnified and labeled with the location of Respondents facility, that demonstrate the level of precipitation estimated by radar at, and in the area of, Respondents' facility during the alleged period of violations. This exhibit corroborates the Swea City rain data to conditions at the Respondents' facility. Note: Complainant reserves the right to present this data in 15 minute increments, assembled into continuous moving images. However due to the size of these data files, the files cannot be submitted by e-filing. Complainant reserves the right to submit these larger radar data files at a later date.

This information is available online at the following url:

<https://www.ncdc.noaa.gov/cdo-web/search?datasetid=GHCND>

3. Evidence that the location of the outlet from the drain tile at the East Fork of the Des Moines River was not underwater at the time of the EPA 2014 inspection:

Respondents' expert (RX 2) appears to put into issue whether the elevated stage of the East Fork of the Des Moines River blocked flow and discharges from the drain tile at the time of EPA's 2014 Inspection. The EPA supplements its prehearing exchange with LiDAR imagery (CX 33) that demonstrates that the drain tile outlet is at least 2-3 feet above the River's bank line. Further the outlet is an estimated 120 feet from the bank line (CX 8, pg. 9). CX 33, a LiDAR (Light Detection And Ranging) radar image of ground surface elevation of the drain tile outfall location, documents that the elevation of the outfall from the drain tile line at the river was approximately 2 feet above the elevation of the bank line of the river. Based on the LiDAR data, the riparian edge at the field has the elevation about 1,201 feet above the sea level while the elevation of the streambank height is approximately 1,194-1,195 feet. The tile outlet's elevation is estimated as about 1,197 feet. Since the outlet's elevation is higher than the streambank's elevation, the outlet was not likely submerged during the bank full flow on June 17, 2014. Mr. Trevor Urban, Richard Roberts and/or Seth Draper are expected to testify regarding field observations during the 2014 and 2016 EPA inspections, including reference to photographs taken during both the 2014 and 2016 inspections that document the water level of the river (CX 1, CX 8, CX 29, CX 30) was at bank line, but not above, during the 2014 inspection.

4. Evidence that the Respondents' facility is a "medium" Concentrated Feeding Operation (CAFO):

Respondent has denied in its Answer that the facility was a medium CAFO at all times relevant and has now provided incomplete cattle inventories to EPA (RX 9). As a result, it is not clear whether the provided records by Respondents in RX 9 are intended to dispute the facility's status as medium CAFO based on the number of head of cattle ("between 300 and 999 for 45 days or more during a twelve (12) month period" (See EPA's Complaint, CX 9, Paragraph 31)). However, Respondent has indicated that additional inventory records are available.

At the time of EPA's 2014 inspection, the total head count of cattle at Respondents' facility was 886 cattle, based on records provided by Respondents. Specifically, at the time of the 2014 inspection, Respondents provided EPA inventory records that show greater than 300 head were present at Respondent's facility for 45 days or more from at least December 23, 2013, to the date of EPA's inspection (See CX 1.7). Specifically, Pen 4 had received 229 head on October 25, 2013, and Pen 4 had received another 100 head on November 8, 2013. Additional head of cattle were also received and maintained at Respondents' facility through the date of EPA's inspection. These inventory records (CX 1.7) support the conclusion that Respondents' facility was a medium CAFO from at least December 23, 2012 through the date of EPA's June 17, 2014 the inspection ("between 300 and 999 head for 45 days or more during a twelve (12) month period"). On March 29 and 30, 2016 (CX 8), EPA inspected Respondents' feedlot, which was confining approximately 982 head of cattle on those dates (CX 8, pg. 5).

In Respondent's Prehearing Exchange, Respondent submits a limited set of records of inventory (RX 9) for individual pens at the facility (May 2011, April 2013 and June 2014). However, these inventory records also support the allegation that the Respondents' facility is a

“medium” CAFO, based on the number of head of cattle present. RX 9 represents that there were 438 head present at Respondents’ facility in May 2011, 375 initially present in April 2013 (with an additional 170 delivered during the April 2013, for a reported total of 545 head), and 631 head reported by Respondents for June of 2014 (with an additional 65 head delivered during June 2014, for a reported total of 696) (compared to 885 documented by EPA at the time of EPA’s inspection). Although, Respondent has provided only monthly totals, all monthly inventory information provided by Respondents to date document greater than 300 head of cattle from 2011 through 2014. The inventory information now provided by Respondents does not provide the date the cattle were first received at the facility. However, at hearing, Seth Draper is expected to testify regarding his knowledge of the animal feeding operation industry and his review of an industry publication which states that “Most beef cattle spend approximately four to six months in a feedlot just prior to harvest where they are fed a grain-based diet.” (CX 34, Modern Beef Production, Fact Sheet). This industry practice supports the conclusion that the inventory records provided by Respondent (RX 9) showing more than 300 cattle present at Respondents’ facility in May 2011, April 2013 and June 2014, would indicate that these cattle would have been present for greater than 45 days. Lastly, at hearing, Mr. Seth Draper will testify regarding his calculation of the number of cattle present at Respondents’ facility as greater than 300 head, as documented by aerial photographs from 2011-2014 (CX 12, CX 28). For example, a June 2011 photograph documents greater than 500 head of cattle present at the facility (CX 28.7).

If Respondents intend to assert the Facility’s CAFO status as a defense based on the number of head of cattle present at their facility, then the additional records inventory records must be made available to Complainant. EPA intends to request these additional records pursuant to its information gathering authorities and reserves its rights to supplement its prehearing exchange with such records, when received.

5. The level of pollutants contained in EPA’s 2014 sample result of wastewater entering into the inlet to the drain tile are representative of process wastewater from CAFOs, and are not representative of run off from the proper land application of manure or process wastewater:

Respondents’ expert witness (RX 2) appears to call in question the source of the pollutants sampled by EPA in the 2014 and 2016 inspections. Seth Draper, a previously listed EPA witness, conducted a thorough literature review and will testify regarding his findings and the underlying scientific literature that support EPA’s conclusions that the land application areas are not a sole, or even significant source, of the pollutants sampled by EPA (CX 35 TO CX 42).

6. Response to comments on EPA’s Modeling Report (CX 2):

EPA disagrees with many of the opinions presented by Respondents’ expert (RX 2) in that inspector testimony and already submitted exhibits address many of the issues raised by Mr. Hentges. However, the EPA submits CX 20.1, as an addendum to EPA’s expert report (CX 20) prepared by Dr. Steven Wang to provide clarification of EPA’s model. EPA’s modeling is based on the best available current information, including statements made by Respondents during the 2014 and 2016 inspections. It appears that Respondents have raised the issue of the facility’s

land application practices, but have not provided any detail in their prehearing exchange. EPA intends to request these additional records pursuant to its information gathering authorities and reserves its rights to supplement its prehearing exchange in response to such information, when received, including revision to its modeling estimates of the number of days of discharges.

B. EXPLANATION OF PENALTIES:

The CWA regulates discharges of pollutants into waters of the United States. Section 309(g)(2)(B) of the CWA, 33 U.S.C. § 1319(g)(2)(B), authorizes the administrative assessment of civil penalties in an amount not to exceed \$10,000 per day for each day during which the violation continues, up to a maximum total penalty of \$125,000. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule of 2004, as mandated by the Debt Collection Improvement Act of 1996, and the EPA's implementing regulations at 40 C.F.R. Parts 19 and 27, civil administrative penalties of up to \$11,000 per day for each day during which a violation continues, up to a maximum of \$157,500, may be assessed for violations of CWA Sections 301 and 402, 33 U.S.C. §§ 1311 and 1342, that occur after March 15, 2004. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rules of 2008 and 2013, civil administrative penalties of up to \$16,000 may be assessed per day for each day during which a violation continues, with up to a maximum of \$177,500 for a "Class II" administrative penalty action for violations of CWA Sections 301, 33 U.S.C. §§ 1311, that occurred between January 12, 2009 and December 6, 2013, and up to \$187,500 for violations that occurred after December 6, 2013.

In determining the amount of penalty, the CWA requires that EPA consider the nature, circumstances, extent and gravity of the violations as well as the economic benefit or savings resulting from the violation. EPA must also consider the violator's ability to pay, prior history of such violations, the degree of culpability, and other matters as justice may require. (33 U.S.C. § 1319(g)(3)). The following is a discussion of EPA's consideration of these statutory factors in determining the amount of the proposed penalty.

1. Statutory Factors Considered in Penalty Calculation

a. Nature, Circumstances, Gravity and Extent

EPA determined the nature and extent of the violations, or "gravity factor" of the violations by taking into account the actual and potential harm to human health and the environment and the significance of the violations. Multiple discharges of pollutants to waters of the United States without a NPDES permit and the economic benefit for delayed implementation of waste water controls at Respondent's facility are the bases for the proposed penalty.

On June 17, 2014, EPA performed a CAFO inspection at Respondents' facility located near Armstrong, Iowa (CX 1). The inspection was performed in order to determine Respondent's compliance status with the CWA. Inspectors observed that Respondents' facility contained open feedlot pens that contained approximately 886 head of cattle. During these visits, EPA observed runoff flowing from the manure pit control structure at Respondents' facility into a swale drained by a drainage tile adjacent to Respondents' facility. This runoff into the swale included process wastewater overflowing from a manure pit installed by Respondents in late

2011. During the 2014 inspection, EPA personnel took samples of water from the swale flowing into the drainage tile. Analyses of the samples determined that pollutants, including bacteria, ammonia and phosphorus, were found entering the drain tile. This drain tile transports water approximately 2,700 feet to an outlet where it discharges above the banks of the East Fork of the Des Moines River.

Again, on March 29 and 30, 2016 (CX 8), EPA inspected Respondents' feedlot, which was confining approximately 982 head of cattle (CX 8, pg. 5). At the time of the 2016 inspection, runoff from the feedlot was flowing into the swale area. Analyses of the samples determined that pollutants, including bacteria, ammonia and phosphorus, were found in the runoff from Respondents' facility into the swale, even though the manure pit was not overflowing and discharging at the time of the 2016 inspection. During the period the inlet to the drain tile was open, uncontrolled discharges of surface runoff would have bypassed the manure pit and flowed into the swale and the open drain tile inlet, and discharged into the East Fork of the Des Moines River, impacting the river's water quality.

Accordingly, at the time of both EPA's 2014 and 2016 inspections, EPA's site observations confirmed that Respondents' feedlot did not have adequate livestock waste control structures in place to control runoff from the site for at least five years. At all times pertinent to the present case (May 2011 to the date of closure of the inlet to the drain tile), Respondent operated as a medium CAFO. Significant precipitation events resulted in the discharge of livestock manure and process wastewater from Respondents' facility through the swale and to the East Fork of the Des Moines River, via the drain tile. None of the discharges were authorized by a NPDES permit.

In 2008, Iowa implemented a Total Maximum Daily Load (TMDL) plan for a downstream segment of the East Fork of the Des Moines River address pathogen (i.e. bacteria) impairment. One segment of the East Fork Des Moines River (segment IA 04-EDM-0010_1) was included in the 1998 Iowa 303(d) List as impaired by excessive indicator bacteria. A TMDL is a calculation of the maximum allowable pollutant load for the impaired segment of the East Fork Des Moines River to address the impairment and meet water quality standards. According to the 2008 TMDL, the source of impairment is attributed to runoff associated with agricultural activity, with the highest impairment in areas with greater concentrations of CAFOs (CX 26, pgs. 19, 40).

The discharge of pollutants, other than pathogens, from Respondent's feedlot also impacted the River. Eroded sediment clouds the water, making it difficult or impossible for plants to grow and suffocates fish by clogging their gills. High levels of ammonia can be toxic to fish and other aquatic life. Excess nutrients can cause algae blooms that consume oxygen that is vital to plants, fish and other aquatic life. Bacterial and viral pathogens found in runoff from CAFOs can cause serious illnesses in humans and animals that come into contact with contaminated water (CX 22 – 25). IDNR's Surface Water Classification document lists the designated uses for the impaired segment as Class A1, Class B (WW1) and High Quality Recreation (HQR). The water quality standard for E. coli Bacteria Criteria (Fecal Colony Units (FCU)/100 ml of water) for Class A1 waters is 126 FCU/100 ml (CX 26). Although not necessary to establish Respondents' liability for unpermitted discharges, EPA has also modeled

the expected concentrations of bacteria at the point of discharge to the East Fork of the Des Moines River, and found that the modeled discharge scenarios would exceed water quality standards for the designated recreational use, with 229,051 FCU/100 ml if a 1.5 hour travel time is used from the inlet to the river. (CX 20.1. pg. 4). These types of discharges, that contain high levels of E coli, put bacteria into the river that persists and contribute to the impairment of the water, posing an ongoing threat of exposure to recreational users (CX 22 -25).

b. Unpermitted Discharges of Pollutants to Waters of the U.S.

EPA's Complaint alleges that Respondent discharged pollutants to waters of the United States without an NPDES permit on at least six (6) events. At the time of its June 17, 2014 inspection, EPA observed a lack of adequate runoff controls and evidence that feedlot runoff had discharged from Respondent's facility. A subsequent inspection on March 29 and 30, 2016, confirmed the runoff from production areas containing pollutants from Respondents' feedlot into the swale occurred when the manure pit was not overflowing. EPA inspectors observed and documented manure and other feedlot pollutants within these erosional features flowing into the swale. In sum, EPA's inspections and sampling documented that the Facility discharged to the East Fork of the Des Moines River from both "controlled" areas (flowing into manure pit) and uncontrolled areas, but at no time during the period relevant to the Complaint were runoff controls adequate to prevent discharges caused by significant precipitation events.

To determine the runoff volume from Respondents' facility resulting from significant precipitation events, and the corresponding number of illegal discharge events, and the corresponding days of violation, EPA utilized the SCS curve number (CN) method (CX 20, CX 20.1). Results from the CN method were then correlated with the storage capacity of the swale and the manure pit to determine when discharges into the open drain tile inlet would occur. The model indicates that Respondents discharged pollutants from the feedlot into the East Fork of the Des Moines River, via the drain tile, on at least 50 days, and possibly many more. On each of these days the pollutants described above discharged into the River.

In its Prehearing Exchange, Respondents provided no issues of fact or law that warrants a reduction in EPA's proposed penalty of "up to \$96,000." Applying the factors detailed herein, EPA believes a penalty of no less than \$96,000 is appropriate for these violations. The EPA's modelling effort has provided evidence of significantly more discharges than was originally anticipated at the time of filing the Complaint. Given the evidence of an increased number of discharges from the Facility and the associated environmental harm, the EPA is considering whether the Complaint should be amended to seek a higher penalty. As described elsewhere in this prehearing exchange, additional information is needed and will be requested from the Respondents. While EPA does not intend to seek to increase the proposed penalty at this time, the EPA reserves its right to amend the Complaint if additional information demonstrates a larger penalty is warranted.

c. Economic Benefit

EPA performed an economic benefit analysis associated with the CWA violations at Respondents' facility. EPA calculated the economic benefit associated with Respondents'

violations by looking at the delayed costs that would have been associated with eliminating the manmade conveyance (vs. the construction and operation of livestock waste controls) at Respondents' facility.

The report uses cost estimates that were based on the 2015 document *Beef Feedlot Systems Manual* published by the Iowa Beef Center at Iowa State University. Specifically, EPA used the cost estimates associated with blocking the inlet and installing the culvert under the facility driveway. For the purpose of calculating economic benefit, EPA only considered engineering and construction costs associated with environmental structures. EPA estimates that construction/implementation of these measures would cost approximately \$3,000. To date EPA has received no cost information from Respondent. At hearing EPA will present testimony that Respondent's total economic benefit from noncompliance by delaying the construction of runoff controls is \$795. This amount is incorporated into \$96,000 proposed penalty discussed above.

d. Ability to Pay

Respondent did not raise ability to pay as a defense in the Answer to the Complaint and he has not provided Complainant with any information to support such a claim.

e. Prior History

Riverview has no known prior enforcement history.

f. Culpability

CAFO regulations covering Respondent's facility have been in place since 1976. Respondent has had ample opportunity as well as the obligation to be aware of all regulations relating to its activities. In approximately 2009, Respondents constructed their feedlot, designed to direct surface runoff into the adjacent swale, known to be drained by a drain tile. Respondents utilized this means of managing process wastewater from their facility until the inlet to the drain tile was blocked after EPA's inspection in June 2014. While an additional culpability penalty component is appropriate, the proposed penalty of \$96,000 includes this statutory factor.

g. Other Matters as Justice may Require

EPA is unaware of any matters that require a penalty reduction.

Nevertheless, EPA considered and incorporated a number of potential mitigation factors in proposing the administrative maximum penalty of up to \$96,000. Respondents constructed and operated out of compliance for years by reliance on the drain tile to manage surface runoff from its facility. Arguably, the violations identified at Respondents' feedlot warrant a proposed penalty many times greater than \$96,000 initially proposed by EPA based on the agency's initial conclusion that there "have been a minimum of six (6) precipitation events within the last five (5) years that resulted in single and/or multi-day discharges of pollutants from the Riverview Facility." At this time, EPA believes that at least 50 days of discharge occurred. However, as will be demonstrated at the hearing or in post-hearing briefs, EPA gave the Respondents the

benefit of doubt when reasonable and was very conservative in applying the runoff model for penalty calculation. Applying the factors detailed herein, EPA believes a penalty of no less than \$96,000, inclusive of EPA's estimate of economic benefit of \$795 is appropriate for these violations.

C. EXHIBITS:

CX 18 – (Previously reserved) Economic Benefit Expert Report by Jonathan S. Shefftz

CX 20.1 – Addendum to Expert Report of Dr. Steven Wang (CX 20)

CX 28 – Cropped and magnified aerial photographs (originals submitted as CX 12)

CX 28.1 – source is Photo at CX 12.5

CX 28.2 – source is Photo at CX 12.6

CX 28.3 – source is Photo at CX 12.8

CX 28.4 – source is Photo at CX 12.10

CX 28.5 – source is photo at CX 12.13

CX 28.6 – source is photo at CX 12.38

CX 28.7 – source is photo at CX 12.13

CX 29 - Cropped and magnified photographs from EPA's June 2014 Inspection
(Previously submitted as CX 1)

CX 29.1 (Source is CX 1.5.25, Discharge from Manure Pit-Uncontrolled)

CX 29.2 (Source is CX 1.5.25, Manure Solid, Water Ripples)

CX 29.3 (Source is CX 1.5.25, Manure Solids, Water Ripples)

CX 29.4 (Source is CX 1.5.25, Manure Storage Alley)

CX 29.5 (Source is CX 1.5.26, Discharge Manure Pit Uncontrolled)

CX 29.6 (Source is CX 1.5.26, Water Movement)

CX 29.7 (Source is CX 1.5.33, Bridge Upstream)

CX 29.8 (Source is CX 1.5.33, Bridge Upstream bankline)

CX 29.9 (Source is CX 1.5.33, Bridge Upstream Tree)

CX 29.10 (Source is CX 1.5.34, Bridge DownStream)

CX 29.11 (Source is CX 1.5.34, Bridge DownStream bankline)

CX 29.12 (Source is CX 1.5.34, Bridge DownStream tree)

CX 30 - Cropped and magnified photographs from EPA's March 2016 Inspection
(Previously submitted as CX 8)

CX 30.1 (Source is CX 8.6.43, Bridge)

CX 30.2 (Source is CX 8.6.43, Bridge Bankline)

CX 30.3 (Source is CX 8.6.43, Bridge Tree)

CX 30.4 (Source is CX 8.6.44, Bridge DownStream)

CX 30.5 (Source is CX 8.6.44, Bridge DownStream Bankline)

CX 30.6 (Source is CX 8.6.44, BridgeDownStream Tree)

CX 31 – Certification of Data from U.S. Department of Commerce, National Centers for Environmental Information

CX 32 - Cropped and magnified 24 - hour composite radar images from the National Oceanic and Atmospheric Administration's National Weather Service Advanced Hydrologic Prediction Service 24-hour composite radar imagery documenting rain events at Respondents' facility. This information is available online at the following url:

<http://water.weather.gov/precip/>

2011

CX 32.1 May 20, 2011 radar image
CX 32.2 May 21, 2011 radar image
CX 32.3 May 22, 2011 radar image
CX 32.4 May 23, 2011 radar image
CX 32.5 May 26, 2011 radar image
CX 32.6 June 10, 2011 radar image
CX 32.7 June 15, 2011 radar image
CX 32.8 June 16, 2011 radar image
CX 32.9 June 19, 2011 radar image
CX 32.10 June 20, 2011 radar image
CX 32.11 June 21, 2011 radar image
CX 32.12 June 22, 2011 radar image
CX 32.13 June 23, 2011 radar image

2012

CX 32.14 April 20, 2012 radar image

2013

CX 32.15 April 10, 2013 radar image
CX 32.16 April 11, 2013 radar image
CX 32.17 April 14, 2013 radar image
CX 32.18 April 18, 2013 radar image
CX 32.19 April 19, 2013 radar image
CX 32.20 April 21, 2013 radar image
CX 32.21 April 22, 2013 radar image
CX 32.22 April 23, 2013 radar image
CX 32.23 April 29, 2013 radar image
CX 32.24 May 2, 2013 radar image
CX 32.25 May 17, 2013 radar image
CX 32.26 May 18, 2013 radar image
CX 32.27 May 19, 2013 radar image

CX 32.28 May 20, 2013 radar image
CX 32.29 May 21, 2013 radar image
CX 32.30 June 22, 2013 radar image
CX 32.31 June 23, 2013 radar image
CX 32.32 June 24, 2013 radar image
CX 32.33 June 25, 2013 radar image

2014

CX 32.34 April 28, 2014 radar image
CX 32.35 April 29, 2014 radar image
CX 32.36 April 30, 2014 radar image
CX 32.37 June 02, 2014 radar image
CX 32.38 June 15, 2014 radar image
CX 32.39 June 17, 2014 radar image
CX 32.40 June 18, 2014 radar image
CX 32.41 June 20, 2014 radar image
CX 32.42 July 25, 2014 radar image
CX 32.43 July 26, 2014 radar image
CX 32.44 July 27, 2014 radar image

CX 33 - LIDAR (Light Detection And Ranging) radar image of ground surface elevation of the drain tile inlet and outfall locations.

CX 34 – “*Modern Beef Production, Fact sheet*,” This publication can be found at the following url:

http://www.explorebeef.org/cmdocs/explorebeef/-_modernbeefproduction.pdf

CX 35 - *Effect of Liquid Swine Manure Rate, Incorporation, and Timing of Rainfall on Phosphorus Loss With Surface Runoff* (Brett L. Allen and Antonio P. Mallarino Iowa State University)

CX 36 – *Phosphorous Loss with Runoff After Applying Fertilizer or Manure as Affected by the Timing of Rainfall* (Antonio P. Mallarino and Mazhar U. Haq, Department of Agronomy, Iowa State University)

CX 37 - *Phosphorus Runoff from Incorporated and Surface-Applied Liquid Swine Manure and Phosphorus Fertilizer* (I. C. Daverede, A. N. Kravchenko, R. G. Hoef, E. D. Nafziger, D. G. Bullock, J. J. Warren, and L. C. Gonzini; *J. Environ. Qual.* 33:1535–1544 (2004))

CX 38 - *Comparing temperature effects on Escherichia coli, Salmonella, and Enterococcus survival in surface waters* (Y.A. Pachepsky¹, R.A. Blaustein¹, G. Whelan² and D.R. Shelton; *Letters in Applied Microbiology* (2014))

CX 39 - *Decay of Fecal Indicator Bacterial Populations and Bovine-Associated Source-Tracking Markers in Freshly Deposited Cow Pats* (Adelumola Oladeinde, Thomas

Bohrmann, Kelvin Wong, S. T. Purucker, Ken Bradshaw, Reid Brown, Blake Snyder, Marirosa Molina; Applied and Environmental Microbiology, Vol 80, No. 1 (2014)

CX 40 - *Escherichia coli* survival in waters: Temperature dependence (R.A. Blaustein , Y. Pachepsky, R.L. Hill, D.R. Shelton, G. Whelan; Water Research Vol. 47 (2013))

CX 41 - *Survival of Manure-borne Escherichia coli and Fecal Coliforms in Soil: Temperature Dependence as Affected by Site-Specific Factors* (Yongeun Park, Yakov Pachepsky, Daniel Shelton, Jaehak Jeong, and Gene Whelan; J. Environ. Qual. 45:949–957 (2016))

CX 42 - *Runoff nutrient transport as affected by land application method* (Gilley, Bartlet-Hunt, Lamb; Biological Systems Engineering, Papers and Publications, University of Nebraska (2013)

CX 43 – *Transport of fecal bacteria from poultry litter and cattle manures applied to pasture land* (Soupir, et al (2005)

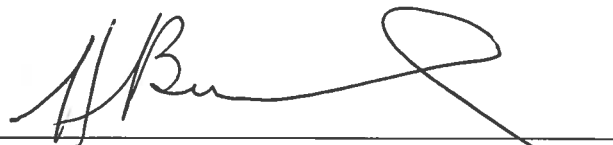
D. ADDITIONAL WITNESSES:

At this time, EPA does not name any additional witnesses, but reserves the right to name additional witnesses prior to hearing.

E. RESERVATIONS

Complainant reserves the right to call all witnesses named by Respondents. Complainant further reserves the right to submit the names of additional witnesses and to submit additional exhibits prior to the hearing of this matter, upon timely notice to the Presiding Officer and to Respondents.

RESPECTFULLY SUBMITTED this 31th day of March, 2017.



Howard Bunch
Sr. Assistant Regional Counsel
U.S. Environmental Protection Agency
Region 7

CERTIFICATE OF SERVICE

I hereby certify that on this 31st day of March, 2017, I filed via the E-filing system the original of this Complainant's Prehearing Exchange to the Office of Administrative Law Judges Hearing Clerk, and sent by email a true and correct copy to Mr. Eldon McAfee, Esq. at the following addresses:

Eldon McAfee (counsel for Tony L. Brown and Joshua A. Brown, d/b/a Riverview Cattle)
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A handwritten signature in black ink, appearing to read 'H Bunch', written over a horizontal line.

Signature of Sender